

EMRE KANLI

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EDUCATION

Vanderbilt University

B.E. in Electrical Engineering, Concentrations in Computer Engineering and Microelectronics
Minors in Computer Science and Engineering Management. Major GPA: 4.00/4 Cumulative GPA: 3.95/4

Nashville, TN
May 2020

Relevant Coursework: Electronics, Embedded Systems, Computer Organization, Signals and Systems, Circuits, VLSI Design, IC Technology and Fabrication, Digital Signal Processing, Electromagnetics, Intermediate Software Design(C++)

Activities: Turkish Student Association (President), Mayfield Project (Treasurer), V-Squared (Mentor), Multicultural Leadership Council (Lantern Speaker), Association of Latin American Students

PROFESSIONAL EXPERIENCE

Institute for Space and Defense Electronics

Research Engineer

Nashville, TN
Jun 2019 – Present

- Analyze, simulate, and characterize Gallium Oxide diodes, mosfets, finfets, and jfets using Sentaurus Synopsys TCAD.
- Engineer boost converter and linear regulator schematics for characterizing post radiation anneal in power devices.
- Calculate Monte Carlo simulations for proton and alpha particle induced radiation using SRIM.

Vanderbilt Aerospace Design Lab

Lead Electronics Engineer

Nashville, TN
Nov 2018 – Present

- Design a rocket and a UAV that are capable of collecting a 10mL lunar ice sample during the flight for the 2020 NASA Student Launch competition through iterative design process, with a 13-member team.
- Awarded the 2019 NASA University Student Launch Initiative championship as a team, developed code for the base station, and payload bay subsystem operations, fabricated parts of the electromechanical systems on the rocket, and tested the subsystems of the rocket to minimize risks.

Vanderbilt University, School of Engineering

Teaching Assistant for Programming and Problem Solving

Nashville, TN
Jan 2018 – Present

- Provide guidance and/or instructions on assignments and projects to over 200 students and received positive feedback.
- Hold weekly office hours with an average of 20+ students and teach optional sessions for extra credit for a class of 70+ students.
- Grade assignment submissions, project submissions, and exams and gave instructive feedback.

Vanderbilt Photonic Crystals Lab

Research Assistant

Nashville, TN
Jan– May 2019

- Investigated Germanium-Silicon Heterojunction VPIN Photodiodes using Lumerical Device and FDTD.
- Explored effects of design parameters and radiation using Lumerical Device and FDTD.

AUGMEA Simulation and VR Technologies Inc

Product Development Intern

Istanbul, Turkey
Jun – Jul 2018

- Modified virtual reality and augmented reality simulations of military and civilian gaming/training environments.
- Strengthened the circuit and programmed the components of a dismantled rifle for a military training program.
- Influenced data quality in rapid motion filtering with HTC Vive, Oculus, Steam VR, HoloLens, and Meta.

LEADERSHIP

Theta Tau Professional Engineering Fraternity, Iota Delta Chapter

Assistant Treasurer & Brotherhood Chair & Rush Chair & Bylaws Committee

Nashville, TN
Jan 2017 – Present

- Manage a semesterly budget of ~20,000USD for chapter and advised members on payment plans.
- Organize brotherhood events, professional gatherings and a three-day retreat for members and alumni.
- Plan rush period with over 10 events for over 60 rushes and facilitated the selection of prospective members.
- Oversee the chapter's rules and proceedings on the 5-member Bylaws Committee.

SKILLS

Language: English (Fluent), Turkish (Native), French (Intermediate), Spanish (Beginner)

Technical: Java, C++, C, Assembly, Git, R Studio, Python

Laboratory: Sentaurus, Cadence, Lumerical, LTSpice, Mathematica, Matlab